



312130



"Paul Bucholtz"
<bucholtzp@michigan.gov>

To

01/15/2009 09:35 AM

Subject Fwd: ADS Proposed Work Plan

Brants review of Arcadis WP.

Paul Bucholtz
Environmental Quality Analyst
Remediation and Redevelopment Division
517-373-8174

>>> Brant fisher 1/15/2009 10:34 AM >>>

The "Preliminary Draft, Groundwater Evaluation and Work Plan for Supplemental Investigation," which was submitted by Arcadis on behalf of Millennium Holdings, LLC has been reviewed. From the review, it is concluded the proposed work plan generally addresses the areas of concern and recommendations made by the Water Bureau (WB) relative to the remediation process at the Allied Disposal Site (ADS). However, the proposed sampling should focus more on inorganics and general chemistry and not on PCBs.

Water Bureau staff had previously reviewed Allied Paper, Inc. Operable Unit Remedial Investigation Report. That review resulted in the following recommendations for future site investigation: ground water sampling of shallow ground water for inorganics and general chemistry beyond the north and west boundaries of the ADS to insure off-site contaminant migration has not occurred, the ground water system be investigated at depths sufficient to insure contaminants have not migrated into the regional flow system with a focus again to the north and west, that static water elevations be collected in the same area to confirm the presence of an upward ground water gradient preventing the migration of contaminants into the regional flow system, that the remediation plan include the installation of "sentinel wells" to the north and west between the ADS and city wells located at Water Pumping Stations 1 and 3. Arcadis identified three primary tasks within the work plan. The tasks included the evaluation of wells as possible "sentinel wells," the collection of water level data and the evaluation of the head differential(s) between the surficial and regional ground water systems, the collection of ground water samples from wells completed in the regional aquifer and the analysis same for PCBs. As proposed the work plan focuses on the area of concern to the north and west of the ADS and should provide information necessary to assessing the potential connection between the surficial and regional aquifer systems, the latter being the one in which the city wells are completed.

However, Arcadis has proposed sampling for PCBs, a focus likely due to the emphasis on this contaminant by the city of Kalamazoo and the public. In fact, at the present time there is little to no evidence that PCBs have migrated off site at levels above the screening criteria. Arcadis even cited this as a general conclusion specifically quoting language in the previous review by WB staff (April 30, 2008 memo from Brant Fisher to Paul Bucholtz). Conversely, inorganics and general chemistry sampling includes analytes such as arsenic, manganese and iron that are much more mobile in the ground water. The sampling done to date has not ruled out their migration off site at levels above the screening criteria. If there is a problem with off site migration it is the analytes of the inorganics and general chemistry sampling that would

most likely be seen at levels above the screening criteria. So, the focus of sampling should be on inorganics and general chemistry, not on PCBs.

In summary, WB staff are of the opinion that the work plan should adequately address our previously identified concerns provided there is a shift in sampling focus to the inorganics and general chemistry parameters of interest. If you have any comments or questions, please contact me at 1-1415.